

# Example 1

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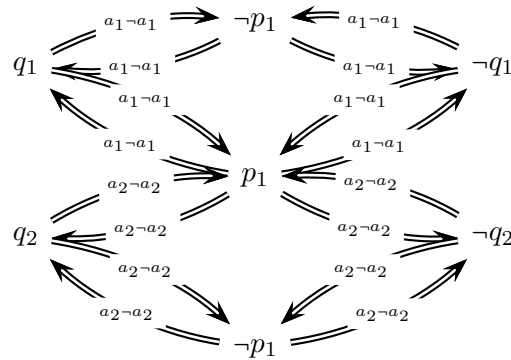
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## 1 Examples

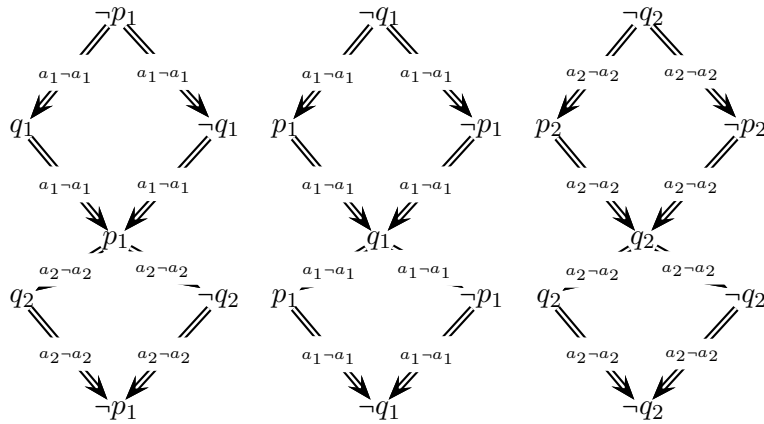
**Example 1.1.** Consider the two pivoted formulas,

$$\Psi_1 = a_1 \vee ((p_1 \vee q_1) \wedge (p_1 \vee \neg q_1)) \wedge \neg a_1 \vee ((p_1 \vee q_1) \wedge (p_1 \vee \neg q_1)) \wedge \\ a_2 \vee ((\neg p_1 \vee q_2) \wedge (\neg p_1 \vee \neg q_2)) \wedge \neg a_2 \vee ((p_1 \vee q_2) \wedge (p_1 \vee \neg q_2))$$

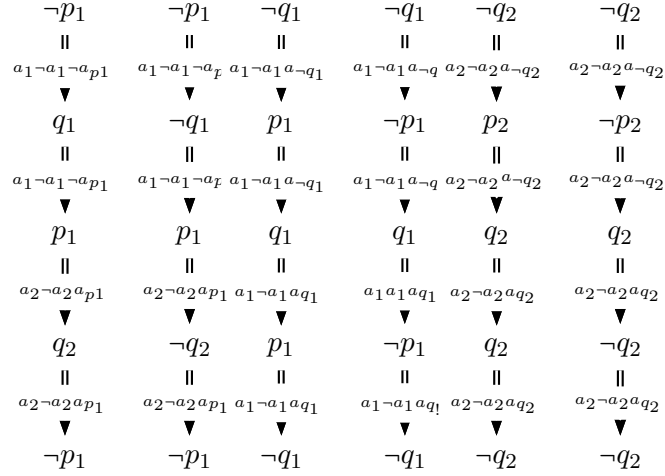
Write the cylindrical digraph,



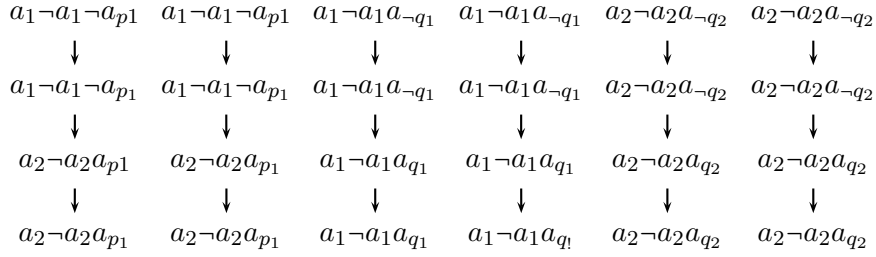
Write the closed digraph,



Obtain the linearized digraph,



Write the companion digraph,



As there is no compatible edge in any column, there is no way to build nested digraphs associated to each edge. The output is **the formula is unsatisfiable**.